## **Author Index**

## Canadian Journal of Plant Science, Volume 84, 2004

Aasen, A., 1051 Abouzeid, M.A., 607 Abramson, D., 1189 Acharya, S.N., 245, 249, 250, 819 Allard, G., 256 Allirand, J.M., 1059 Allmaras, R.R., 687 Almaraz, J., 256 Altinok, S., 181 Anderson, D.M., 537, 541 Angadi, S.V., 252, 697, 705 Angadi, V.V., 697 Asay, K.H., 157 Asiedu, S., 255 Auclair, J., 57 Avice, J.C., 1059

Babcock, C., 757 Babij, V., 1193 Bal. A.K., 65 Balakumar, T., 541 Balasubramanian, P., 31 Bamford, K., 251, 253 Bandara, M., 254 Banniza, S., 237, 239 Baron, V.S., 1051 Basnyat, P., 97 Beasley, B.W., 987 Bélanger, G., 250, 256, 535, 1101, 1113 Biederbeck, V.O., 11, 37, 487 Bing, D.-J., 235 Bishnoi, U.R., 1213 Bittman, S., 129, 205, 250, 257, 536 Blackshaw, R.E., 419, 739, 955, 971 Blade, S., 251, 254, 533, 901 Blanchard, J., 541 Blenis, P., 443, 773 Blonski, L.J. 773 Bogdanoff, C.P., 545, 555 Boland, G.J., 57 Booth, B.D., 1167 Bootsma, A., 1113 Bork, E.W., 773 Boswall, P., 538 Botha, E., 855

Brégard, A., 256, 1101 Bremer, E., 473 Briand, B.H., 713 Briggs, K.G., 254 Brinsfield, R.B., 713 Brown, J., 397 Bullied, W.J., 319 Burton, D., 536, 541 Busso, C.A., 195 Butler, S., 535

Caldwell, C. 255, 540 Caldwell, C.A., 1109 Caldwell, C.D., 535, 537, 539, 540, 541, 1155 Caldwell, C.E., 251 Campbell, A.J., 536 Campbell, C.A., 11., 487 Cardona, C., 891 Carefoot, J.M., 411 Carew, R., 829 Castonguay, Y., 1113 Cattani, D.J., 117 Caumes, E., 299 Cavers, P.B., 327 Chandler, K., 1167 Chandler, M.A., 687 Chang, C., 739 Chang, K.F., 311, 901 Charlebois, D., 279 Charmley, E., 538, 539 Charmley, L.L., 538 Chen, F., 785 Chen, Q., 1015 Chen, W.-S., 881 Chen, X.M., 1015 Chen, Y., 797 Chen, Y.-A., 881 Cheverie, R.M., 538 Chinnasamy, G., 65 Chmielewski, J.G., 1221 Cholewa, E., 252 Chong, C., 1127 Chong, J., 241 Choo, T.M., 805 Chu, G., 254 Clapham, W.M., 511 Clapperton, J., 250 Clarke, F.R., 811, 1001 Clarke, J.M., 811, 1001 Clayton, G., 37, 79, 89, 235, 419, 453, Cober, E., 57
Cohen, R.D.H., 1037
Cole, D.E., 343
Coleman, W.K., 291
Conner, R., 223, 227, 231, 235, 1015, 807
Costea, M., 631
Coulman, B., 125, 815
Cowan, T., 405
Cutforth, H., 252, 697, 705, 1085

Darbyshire, S., 327, 343 Darroch, B.A., 245 Daun, J.K., 749 Davis, J.B., 397 de Araujo, M.R.A., 125 de Jong, H., 589 Decau, M.L., 1059 Deen, Bill, 251 DeGraaff, M.N., 539 Delaquis, P.J., 873 DePauw, R.M., 811 Dexter, J.E., 1001 Dick, A.C., 1051 DiTommaso, A., 327 Dong, S.K., 529 Donnelly, D.J., 255, 256, 257 Doohan, D.J., 669 Dosdall, L., 419, 971, 1171 Dostaler, D., 615 Doust, M.A., 1001 Drapeau, R., 542 Dribnenki, J.C.P., 797 du Croix Sissons, M.J., 319 Duguid, S.D., 801 Dürr, G.H., 542, 791 Duzan, H., 255 Dyck, B.S., 1183

El-Tarabily, K.A., 607 Entz, M., **249**, **251**, **253**, 1093, 1097 Entz, T., 411 Erdoğdu, I., 181 Essah, S.Y.C., 1213 Estergaard, B., 545, 555

Fairey, N.A., 163 Fedders, J.M., 511 Feindel, D.E., 117 Ferguson, T., 419, 971 Fernandez, M.R., 811 Fetch, Jr., T.G., 1 Fillmore, S.A.E., **542**, 791

Bowen, P.A., 545, 555

Braul, A., 249

Bravo, O.A., 195

Bowes, K., 249, 540, 1155

677, 955, 971, 1051

Clements, D.R., 327, 343

Page numbers in **bold** refer to abstracts.

Flaten, D.N., 1093 Flore, N., 47, 105, 253, 473 Forge, T., 250 Fowler, D.B., 757 Fraser, J., 143 Fratini, R., 981 Fredeen, A.H., 539 Frégeau-Reid, J., 757, 909 Friebel, D., 249, 250 Fritz, V.A., 687 Fu, Y.-B., 23

Gallant, T.L., 541 Gan, Y., 11, 235, 252, 487, 697, 705, 955 Gehl, D., 235, 807 Geleta, S.B., 713 Georgallas, A., 541 Gill, K.S., 719 Giorgetti, H.D., 195 Gjuric, R., 117 Glover, D.E., 1037 Goh, T.B., 47, 213 Gonthier, C., 250 Good, A.G., 915 Gordon, R., 541, 542, 543 Gossen, B.D., 311, 401, 901, 1105 Govasmark, E., 542 Graef, G.L., 57 Grant, C.A., 79, 89, 453 Green, A.G., 797 Grimmett, M., 541, 542 Grombacher, A.W., 254 Guak, S., 259 Guillemette, L., 805

Haber, S., 241 Habib, A., 255, 257 Hall, L.M., 923 Hammermeister, A.M., 542 Hanson, K., 37, 250 Hao, X., 865 Harapiak, J., 105, 253 Hardy, G.E.ST.J., 607 Harker, K.N., 419, 677, 955, 971 Harmon, B.L., 397 Harris, C.R., 915 Hatcher, D.W., 1001 Hatton, M., 540 Helm, J.H., 477 Henry, R., 537 Herbert, L.C., 823 Hermans, P., 305 Ho, K.M., 805 Hoekstra, G.J., 757 Hoeppner, J., 251 Hogue, E.J., 823

Holm, F.A., 1205

Gusta, L.V., 463

Howard, R.J., 311, 901 Huang, C.-K., 881 Huang, H.C., 223, 227, 231, 739, 807 Huang, X., 529 Hucl, P., 31, 519, 1205 Humble, S., 251 Hume, D., 254 Hunt, D., 129, 250 Hutton, G., 539 Hwang, S.F., 311, 901

Irvine, B., 1093 Ivany, J.A., 252, 538, 1199

Jacquet, A., 1059
Janse, S., 1167
Janzen, H.H., 411
Jefferson, P.G., 11, **249**, **250**, 401, 503, 1037, 1067
Jensen, K.B., 157
Jensen, K.I.N., 669
Jia, X., 1015
Jiang, Y., 529
Johnson, D.A., 157
Johnson, E.N., 463, 955, 971
Johnston, A.M., 79, 89, 431, 453, 1025
Juskiw, P.E., 477

Karamanos, R.E., 47, 105, 213, 253 Kaur, K., 71 Kelbert, A.J., 254 Kemp, G., 231 Kenaschuk, E.O., 801 Kephart, K.D., 955 Kibite, S., 23, 241 Kiehn, F.A., 223, 227, 231 Kielly, G.A., 1037 Kimbeng, C.A., 1193 King, J., 253, 343 Kirkland, K.J., 463, 955 Klein-Gebbinck, H.W., 691 Knowles, N.R., 443 Knox, R.E., 811 Korkmaz, A., 1161 Kovacs, M.I.P., 765 Kowalenko, C.G., 129, 250, 257 Kunelius, H.T., 542, 791

Lada, R., 255, 537, 541 Lafond, G.P., 79, 89, 97, 431, 1025 Lajeunesse, J., 253 Lamy, M.P., 265, 569, 1135 Larney, F.J., 987 Leclerc, Y., 845, 855 Leiva-Brondo, M., 603 Lemke, R., 11, 249, 487 Li, H.J., 1015 Li, Z., 885 Lithourgidis, A.S., 1235 Liu, K., **542** Liu, Q., 529 Liu, W., **251** Liu, Z., 885 Lombardo, G.M., 1001 Looney, N.E., 259 Lopetinsky, K., **253** Lukow, O.M., 71 Lupwayi, N.Z., 37, 79, 89, 677 Lynch, D.H., **542** Lysenko, E., 949 Lysyk, T.J., 1077

Mabood, F., 252 MacDonald, D., 535, 537, 539, 540, 541 MacIsaac, K., 537 MacLeod, J., 536, 537, 541, 542 Madani, A., 543 Mal, T.K., 365 Malcolmson, L.J., 71 Malhi, S.S., 719, 939 Mapplebeck, L., 540 Marchylo, B.A., 1001 Martin, R.A., 538, 805 Martin, R.C., 539, 541, 542 Maruschak, J.L., 519 Matus-Cádiz, M.A., 519 May, K., 503, 1067, 1077 May, W.E., 431, 1025 McCaffrey, J.P., 397 McCaig, T.N., 811 McCallum, B., 241, 1015, 1189 McCartney, C.A., 749 McCartney, D., 143, 187, 205, 539, 1051 McCaughey, W.P., 503, 1067 McClay, A., 343 McConkey, B., 97, 487, 705 McDonald, C.L., 252, 697 McEachern, S.F., 797 McFarlane, L., 503, 1067 McGinn, S., 257 McIver, J., 252 McKenzie, D.B., 65, 525, 538 McKenzie, R.H., 473 McLean, N., 539, 541 McLeod, D.G.R., 915 McNeil, P., 535 McPherson, M.A., 915 McRae, K., 525, 538, 539, 542, 791 McVetty, P.B.E., 731, 749 Meadows, P.A., 539 Meloche, F., 305 Mengli, Z., 1077 Menzies, J.G., 241, 625 Messenger, D., 249, 250

Meuriot, F., 1059

Michaels, T.E., 891 Michaud, R., 250, 256, 1101 Middleton, A., 473, 519 Milburn, P.H., 589 Millard, P., 259 Miller, J.J., 987 Miller, P.R., 117, 955 Mir, Z., 143, 819 Mmbaga, M.T., 837 Mohr, R., 431, 1025 Mongrain, D., 1113 Montani, T., 195 Montenegro, O.A., 195 Mooney, D., 519 Morard, P., 299 Moreau, G., 845, 855 Moulin, A., 97 Moyer, J.R., 739, 819 Mulford, F.R., 713 Mündel, H.-H., 223, 227, 231, 807 Munroe, M.D., 536 Murray, A.M., 877 Murray, J.D., 891 Mustafa, A.F., 250 Muthusamy, S.K., 541

Najda, H., 143 Narine, L., 365 Nass, H.G., **251**, **537**, **542**, 1109 Neilsen, D., 259, 823 Neilsen, G.H., 823 Nesbitt, N.T., 463 Nitschelm, J., 739 Noll, J., 241 Nuez, F., 603 Nuri Nas, M., 1161 Nuttall, W.F., 205

O'Brien, E.G., 1085 O'Donovan, J.T., 419, 677, 971 O'Keefe, J.A., 713 Olfert, O.O., 1171 Olson, B.M., 987 Olson, R., 535 Omielan, J., 254 Orr, D., 235 Ortiz-Medina, E., 256 Ozbay, N., 1161 Ozga, J.A., 443

Pageau, D., 253
Palanisamy, R., 255
Papadopoulos, Y.A., 525, 538, 539
Parachnowitsch, A.L., 599
Patterson, K., 540
Paulley, G., 949
Pauls, K.P., 891
Paynter, B.H., 477
Pearen, J., 187

Pederson, V.D., 1 Peill, P., 540 Pelcat, Y., 97 Pelletier, S., 256 Penner, K.R., 1097 Percival, D.C., 877 Pérez de la Vega, M., 981 Peters, R.D., 537 Phibbs, T., 909 Pickering, R.A., 935 Pincock, J., 540, 1155 Pinnisch, R., 254 Pomarenski, Q., 47 Potts, D., 697 Pozniak, C.J., 1205 Preston, K.R., 71, 949 Price, M., 251, 1109 Progens, J., 603 Przednowek, D.W.A., 1093 Purvis, P., 1127

Qi, H., 785

Raciti, C.N., 1001 Rahman, M.H., 965 Rajcan, I., 57, 181 Raney, J.P., 939 Rashid, K.Y., 797, 801 Regitnig, P., 739 Reinecke, D.M., 443 Rice, W.A., 37, 79, 89, 677 Richards, K.W., 23 Richer, C., 265, 279, 569, 1135 Rickwood, R., 1085 Rioux, J.A., 265, 569, 1135 Rioux, S., 253, 615 Riungu, T.C., 731 Roberts, J.C., 1155 Rochette, P., 1113 Rodd, A.V., 252, 538, 542 Rodríguez, G.D., 195 Rodriguez-Burruezo, A., 603 Romo, J.T., 173 Rossnagel, B.G., 935 Roswell, J., 757 Rousseau, G., 615 Rowsell, J., 254, 805 Ruiz, M.L., 981

Sahota, A.S., 519 Saindon, G., 223, 227, 231 Saint Pierre, C., 195 Sampson, G., **540** Sanderson, J.B., **251**, **536**, **537** Sanderson, K.R., **537** Sartonov, A.D., 327 Sauvé, R.J., 837 Scarth, R., 749 Schaafsma, A.W., 891, 909 Scheifele, G., 805 Schlichting, L.M., 1001 Schoofs, A., 251 Scoles, G.J., 935 Seguin, P., 250, 254 Seidle, E., 1171 Selles, F., 11, 249, 250, 487 Semple, J.C., 1221 Shropshire, C., 405 Sikkema, P., 405 Silvestre, J., 299 Simon, J.C., 1059 Singh, A.K., 935 Sivasithamparam, K., 607 Slinkard, A., 237, 239, 795 Sloan, A., 235 Smith, D., 252, 255, 256 Smith, D.L., 254, 256, 257 Smith, D.M., 1189 Smith, E., 536, 543 Smith, E.G., 411, 829 Smith, Jr., S.R., 117, 1193 Soltani, N., 405 Soroka, J.J., 1105, 1171 Souleimanov, A., 254, 255, 256 Spaner, D., 217, 253, 254, 257 Sparry, E., 757 Specht, E.G., 669 Stan, S., 873 Stanich, K., 873 Stanton, D., 254 Steadman, J.R., 57 Steffenson, B.J., 1 Stevenson, F. C., 419, 431, 971, 1025 Stewart, G., 251 Stiles, A., 255 Stonehouse, T., 105, 253 Stratton, G., 543, 877 Strydhorst, S., 253 Su, H., 1015 Sun, X., 785 Supanjani, S., 256, 257 Swanton, C.J., 1167

Tai, G., 589
Tang, K., 785
Tardiff, F.J., 631
Tarn R., 589
Tawaha, A.M., 254
Tekauz, A., 1189
Thanh, T.H., 615
Thiessen Martens, J.R., 1093, 1097
Thomas, W., 540
Tiryaki, I., 1161
Todd, A.G., 217, 257
Toivonen, P.M.A., 873
Tollenaar, T., 251
Tolman, J.H., 915
Topinka, A.K.C., 923

Topinka, K., 955 Townley-Smith, L., 187 Tremblay, G.F., 250, 256, 1101 Tsao, R., 539 Tuchelt, J., 1085 Tucker, C., 599 Turkington, T.K., 235, 677 Turnbull, G.D., 311, 901

Ukrainetz, H., 1105

Vaage, A., 187 Vaillancourt, G., **539** Van Acker, R.C., 319 Van Vliet, L., **257** Vandenberg, A., 31, 237, 239, 533, 795 Vázquez, D., 949 Veitch, R.S., **537**, **541** Vera, C., 235, 939 Vessey, J.K. 1097 Waldron, B.L., 157 Walker, D., 251 Walley, F., 79, 89 Wan, B., 785 Wang, H., 311 Wang, Z.H., 939 Warkentin, T., 235, 237, 239, 533, 795, 1183 Warman, P., 542 Warner, J., 865 Weaver, S.E., 631 Weisenburger, R., 539 Wen, Z.Y., 1015 Whittington, R., 599 Wichman, D.M., 955 Willms, W.D., 1077 Winston, M.L., 599 Wittenberg, K.M., 1193 Womack, H.E., 7113 Woods, D.L., 691

Woosaree, J., 245, 503, 1067

Wyand, S., **537**Xue, A., 235, 757, 1183

Yang, R., **539**Yang, R.-C., **254**Yao, J., 785

Ye, T., **254**Yu, S., 785

Zebarth, B.J., 129, 589, 845, 855

Zeigler, K., **539**Zelmer, R.P., 11, 249, 487

Wu, X., 250

Zebarth, B.J., 129, 589, 845, 853
Zeigler, K., **539**Zelmer, C.D., 1097
Zentner, R.P., 11, **249**, 487
Zhang, T.Q., 865
Zhao, X., 785
Zheljazkov, V., **249**, 535, 536, 540, 1155
Zheng, W., **254**Zhou, X., **252**, **255**, **256**Zilka, J., 57

# Subject Index

## Canadian Journal of Plant Science, Volume 84, 2004

ACE-1 perennial cereal rye, 819 Acid detergent fibre

leaf and stem nutritive value of timothy, 1101

sub-alpine meadow in northern China, 529

Acid rain

simulated acid rain impact on wild blueberries, 877

Agroclimatic indices

changes in the frost-free season on the Canadian prairies, 1085

Agronomic suitability, 537

Air temperature

rhizoctonia blight of chickpea, 901

Alfalfa, 542

alfalfa resistance to postharvest

Aspergillus species, 1193
companion planting forages, 217
fertilizers on seed alfalfa, 1105
initial N status and residual leaf
area after cutting affect alfalfa
regrowth, 1059

slow wilting in alfalfa, 401 spring black stem of alfalfa, 311

Allium cepa L. (see Onion)

Alternative seeding date fall seeding date and polymer coatings, 955

Amaranthus hybridus, 631

Amaranthus retroflexus, 631 Amaranthus powellii, 631

Ammonia

emissions, **536** 

impacts, 536 loss, 536

1055, 330

sources, 536

Ammonium, 541 Amplified fragment length polymorphism

AFLP analysis of Canadian oat cultivars, 23

Anethum graveolens

essential oil of Nova Scotia dill, 1155

Annual forage

forage cropping systems in Saskatchewan, 187 Antixenosis

influence of leafhoppers on bean yield, 891

Apiaceae

essential oil of Nova Scotia dill, 1155

Apparent fertilizer N recovery potato nitrogen use efficiency, 845

micronutrient nutrition of apple orchards, 823

autumn-applied urea-N in apple, 259

Apple characteristics

the value of apple characteristics, 829

Application time, 542

Arbuscular mycorrhizal fungi mycorrhizal colonization of flax, 1097

Argentina rangelands

grass competitive ability and defoliation tolerance, 195

Arisaema heterophyllum

agglutinin gene resistance to aphids, 785

Ascochyta blight

CDC Desiray desi chickpea, 795

Ascospores

Sclerotinia inoculations in soybean, 615

Aspergillis repens

alfalfa resistance to postharvest

Aspergillus species, 1193

Asteraceae

Solidago nemoralis Ait., 1221 Avena sativa L. (see Oat)

Baking

baking test for Uruguayan French style bread, 949

Barley, 538, 541, 542

companion planting forages, 217 HT-2 and T-2 toxins in barley, 1189 increasing urea safety with NBPT, 105

leaf development in spring barley, 479

Nordbec barley, 805

predicting agronomic performance using radiometry, 1

quantitative scald resistance in barley, 935

Barley (spring), 537

leaf development in spring barley, 479

Barley yield

barley yield and nutrient uptake under fresh or composted manure, 987

Base temperature

modelling berseem clover development, 511

Beach pea

fatty acid and elemental composition of beach pea, 65

Bean

Early Rose pink bean, 227 effect of tillage and cropping system on sugarbeet, 739

Bean, black

Black violet common bean, 223

Bean, common

Arikara Yellow common bean, 807 Black violet common bean, 223

Bean, dry

dry bean planting date, 31 zinc responses of dry beans in Manitoba, 213

Bean, kidney

sensitivity of kidney beans to S-metolachlor and Imazethapyr, 405

Bean, navy

influence of leafhoppers on bean yield, 891

Morden003 navy bean, 231

Bedding

barley yield and nutrient uptake under fresh or composted manure, 987

Bentonite S

sulphur fertilizer management in canola and wheat, 453

Berseem clover

modelling berseem clover development, 511

Biochanin A, 539

Biofuel

potential of native grasses as ethanol feedstock, 1067

Biological control

Aphanomyces euteiches response to oat extract, 687

Biological cost

mur and nap cytoplasm hybrid performance comparisons, 731

Biological soil quality herbicides and soil microorganisms, 677

grass competitive ability and defoliation tolerance, 195 potential of native grasses as ethanol feedstock, 1067

Black bean

Black violet common bean, 223

Blueberry

simulated acid rain impact on wild blueberries, 877

Bombus impatiens/B. occidentalis pollen foraging by bumblebees, 599

Boron

micronutrient nutrition of apple orchards, 823

Brassica

embryo rescue in Brassica, 965 Brassica napus L. (see Canola) Brassica rapa L. (see Canola)

Brassica oilseeds

early seeding of canola and mustard, 705

Brassica species

canola and mustard response to temperature and water stress, 697

Bread

baking test for Uruguayan French style bread, 949

Breeding

alfalfa resistance to postharvest Aspergillus species, 1193

Bromegrass

Knowles hybrid bromegrass, 815

harvest management on grass performance in northeast Saskatchewan, 205

Bromus riparius × Bromus inermis Knowles hybrid bromegrass, 815

Brown girdling root rot

check rows required for root rot screening, 691

Bumblebee

pollen foraging by bumblebees, 599

forage quality of seeded native grasses in the fall, 503

C4 grasses

forage quality of seeded native grasses in the fall, 503

vegetable yield loss without pest control, 915

Canada

HT-2 and T-2 toxins in barley, 1189 Canadian distribution

Phragmites australis, 365

Canadian prairies

changes in the frost-free season on the Canadian prairies, 1085

Canadian wheat

baking test for Uruguayan French style bread, 949

canola seed quality, 463 check rows required for root rot screening, 691

early seeding of canola and mustard, 705

fall seeding date and polymer coatings, 955

genotypic and environmental effects of saturated fatty acids in canola, 749

increasing urea safety with NBPT, 105

mur and nap cytoplasm hybrid performance comparisons, 731

N management, seeding depth and canola production, 719

optimum acquisition times for remote sensing, 97

polymer seed coating of fall-seeded canola, 971

root maggot damage to prairie canola roots, 1171

Carrot, 537

carrot cavity spot, 607 metribuzin on carrot, 669 reduced tillage for onion and carrot, 1167

Carthamus

theoretical hybridization potential of transgenic safflower, 923

Cavity spot

carrot cavity spot, 607

Cell-wall-degrading enzymes carrot cavity spot, 607

Cellulose

potential of native grasses as ethanol feedstock, 1067

Ceratoides lanata

winterfat establishment, 173

Cereal and field pea mixtures swath grazing potential, 1051

Cereal disease, 538

Cereals, 538

Cereals (spring), 540

Ceutorhynchus assimilis

resistance of canola-quality Sinapis alba to Ceutorhynchus obstrictus, 397

Ceutorhynchus obstrictus

resistance of canola-quality Sinapis alba to Ceutorhynchus obstrictus, 397

Chickpea

CDC Desiray desi chickpea, 795 rhizoctonia blight of chickpea, 901

Chip colour

colour and potato chip quality, 291

Leucanthemum vulgare Lam., 343 Chrysanthemum leucanthemum Leucanthemum vulgare Lam., 343

Cicer arietinum L

CDC Desiray desi chickpea, 795 rhizoctonia blight of chickpea, 901

Claviceps purpurea ergot on wheat, 625

Climate change

changes in the frost-free season on the Canadian prairies, 1085

Climate, cool 538

birdsfoot trefoil harvest management, 525

Climatic indices

climate change and winter damage to fruit trees, 1113

Clover

modelling berseem clover development, 511

Combining ability

alfalfa resistance to postharvest Aspergillus species, 1193

Common bean

Arikara Yellow common bean, 807 Black violet common bean, 223

Common reed

Phragmites australis, 365

Community-level physiological profiles (CLPP) herbicides and soil microorganisms, 677

Compositae

Solidago nemoralis Ait., 1221

Compost

barley yield and nutrient uptake under fresh or composted manure, 987

Concentration

concentration de la solution nutritive pour la culture hors sol de la tomate, 299

Constructed wetlands, 543 Conventional tillage

reduced tillage for onion and carrot, 1167

Cool climate, 538

birdsfoot trefoil harvest management, 525

Copper

effect of foliar Cu on wheat, 47

distribution of deoxynivalenol in Gibberella-infected food, 909 western corn rootworm, 305

Cornborer, 538

Cornus florida L.

powdery mildew control in flowering dogwood, 837

Cover crop, 537

Creeping bentgrass

creeping bentgrass seed production, 117

Crop growth response, 539

Crop injury

sensitivity of kidney beans to S-metolachlor and Imazethapyr, 405

Crop nutrients, 541

Crop residue

productivity and profitability of straw-tillage and N treatments in Alberta, 411

Crop rotation

effect of tillage and cropping system on sugarbeet, 739

mycorrhizal colonization of flax, 1097

N benefits of grain legumes in Manitoba, 1093

Rhizobium in nonlegume crops, 37

Crop tolerance

sensitivity of kidney beans to S-metolachlor and Imazethapyr, 405

Crop yield

predicting agronomic performance using radiometry, 1

Crossing success crossing in lentil, 981

Crucifer-feeding root maggots root maggot damage to prairie canola roots, 1171

Crude protein

sub-alpine meadow in northern China, 529

Crude protein yield

herbage yield and crude protein responses to hog manure, 773

Cultivar

soybean cultivars in Turkey, 181

Cultivar description

2090 low linolenic acid flax, 797
ACE-1 perennial cereal rye, 819
ARC Mountain View June grass, 245
Arikara Yellow common bean, 807
Black violet common bean, 223
Boudrias oat, 241
Brookfield spring wheat, 1109
CDC Desiray desi chickpea, 795
CDC golden field pea, 237
CDC striker field pea, 239

Cutlass field pea, 533

Early Rose pink bean, 227

Knowles hybrid bromegrass, 815 Lovitt hard red spring wheat, 811

Miser field pea, 235

Morden003 navy bean, 231

Nordbec barley, 805

Prairie Blue flax, 801

Turia pepino, 603

Cultivar selection and marketing influence of protein concentration on farinograph measurements,

Cultivar tolerance

metribuzin on carrot, 669

Cultural control, 538

Culture hors sol

concentration de la solution nutritive pour la culture hors sol de la tomate, 299

Cytoplasmic male sterility

mur and nap cytoplasm hybrid performance comparisons, 731

Dactylis glomerata

season of year response by orchardgrass to N fertilizer, 129 Daucus carota L. (see Carrot)

Daucus carota L. (set

Daylength

leaf development in spring barley, 479

Deferred grazing

forage cropping systems in Saskatchewan, 187

Defoliation

initial N status and residual leaf area after cutting affect alfalfa regrowth, 1059

Delia ssp.

root maggot damage to prairie canola roots, 1171

Delta

carbon isotope discrimination in tall fescue, 157

Denitrification, 536

Density

distribution of deoxynivalenol in Gibberella-infected food, 909

Deoxynivalenol

distribution of deoxynivalenol in Gibberella-infected food, 909

Detached leaves

spring black stem of alfalfa, 311

Development

soybean cultivars in Turkey, 181

Diabrotica virgifera virgifera western corn rootworm, 305

Digestibility

leaf and stem nutritive value of timothy, 1101

Dill

essential oil of Nova Scotia dill, 1155

Disease

vegetable yield loss without pest

Disease resistance

wheat disease resistance, 1015

Distribution

western corn rootworm, 305

Doritis pulcherrima

daylength affects IAA content and flowering in *Doritis* pulcherrima, 881

Dormancy

Lovitt hard red spring wheat, 811

Dormant seeding

early seeding of canola and mustard, 705

polymer seed coating of fall-seeded canola, 971

seeding date effect on

herbicide-tolerant canola, 419 Drought stress

Diought stress

evapotranspiration of pea, 473

Dry bean

dry bean planting date, 31 zinc responses of dry beans in Manitoba, 213

Dry matter accumulation nitrogen use efficiency of potato, 589

DTPA-extraction

effect of foliar Cu on wheat, 47 zinc responses of dry beans in Manitoba, 213

Durum wheat (see Wheat, durum)

Early-generation test

early generation quality tests, 71

Ecology

Amaranthus retroflexus, A. Powellii and A. hybridus, 631

Economic

productivity and profitability of straw-tillage and N treatments in Alberta, 411

Economic returns

managing green manure in semiarid Canadian prairie, 11

Economic yield, maximum season of year response by orchardgrass to N fertilizer, 129

EDTA, 536

Egypt

carrot cavity spot, 607

Element

fatty acid and elemental composition of beach pea, 65

Elytrigia harves

harvest management on grass performance in northeast Saskatchewan, 205

Embryo development embryo rescue in *Brassica*, 965

Embryo rescue in *Brassica*, 965

Emergence

canola seed quality, 463 dry bean planting date, 31 methyl jasmonate improves watermelon emergence at low temperature, 1161

Environment

genotypic and environmental effects of saturated fatty acids in canola, 749

Environmental conditions crossing in lentil, 981

Environmental sustainability herbicides and soil microorganisms, 677

Ergot

ergot on wheat, 625

Erysiphe pisi

resistance to powdery mildew in pea, 1183

Erysiphe (sect. Microsphaera) pulchra powdery mildew control in flowering dogwood, 837

Essential oils, 540 essential oil of Nova Scotia dill,

Ethephon, 537

Eurotia lanata winterfat establishment, 173

Fall rye, 537
Fallow frequency
cropping frequency and wheat
production in semiarid prairie,

Farinograph
early generation quality tests, 71
influence of protein concentration
on farinograph measurements,
765

Farming systems, 542 Fatty acid

fatty acid and elemental composition of beach pea, 65

Feed, 538 Feed barley

Nordbec barley, 805

Feekes growth stage

effect of foliar Cu on wheat, 47

micronutrient nutrition of apple orchards, 823 Fertilizer

fertilizer requirements of industrial hemp, 939

Fertilizer nitrogen

productivity and profitability of straw-tillage and N treatments in Alberta, 411

Festuca arundinacea

carbon isotope discrimination in tall fescue, 157

Fibre protein

forage quality of seeded native grasses in the fall, 503

Field pea (see Pea, field)

Field measurement, 536

Flax

2090 low linolenic acid flax, 797 mycorrhizal colonization of flax, 1097

Prairie Blue flax, 801

Floraison

rusticité et croissance de dix cultivars de potentilles, 569

Floral initiation

daylength affects IAA content and flowering in *Doritis* pulcherrima, 881

Flower bud growth

autumn-applied urea-N in apple, 259 Foliar

zinc responses of dry beans in Manitoba, 213

Forage, 535, 538, 539

herbage yield and crude protein responses to hog manure, 773 soybean cultivars in Turkey, 181

Forage crop, 535

Forage crop rotation, 542

Forage quality, 540

forage quality of seeded native grasses in the fall, 503

Forage yield

annual forage legumes in Alberta and Saskatchewan, 143

carbon isotope discrimination in tall fescue, 157

Formononetin, 539

Fresh manure

barley yield and nutrient uptake under fresh or composted manure, 987

Frost date, last spring and first fall changes in the frost-free season on the Canadian prairies, 1085

Frost-free season

changes in the frost-free season on the Canadian prairies, 1085

Fruit set

autumn-applied urea-N in apple, 259

Fruit production

climate change and winter damage to fruit trees, 1113

Fry colour

potato yield and processing quality, 855

Fungicide, 537

Fusarium, 538

distribution of deoxynivalenol in Gibberella-infected food, 909

Fusarium spp.

seed-borne Fusarium spp. in spring wheat, 757

Fusarium damaged kernels seed-borne *Fusarium* spp. in spring wheat, 757

Fusarium head blight

seed-borne Fusarium spp. in spring wheat, 757

Fusarium sporotrichioides

HT-2 and T-2 toxins in barley, 1189

Genetic diversity

AFLP analysis of Canadian oat cultivars, 23

Gene flow

theoretical hybridization potential of transgenic safflower, 923

Gene stacking

field performance of imazamox-resistant spring wheat, 1205

Genetic relationship

AFLP analysis of Canadian oat cultivars, 23

Genotype

assessment of variation in Idaho fescue, 1077

genotypic and environmental effects of saturated fatty acids in canola, 749

Germination

fall seeding date and polymer coatings, 955

loss of seedling vigor in pea, 443 methyl jasmonate improves watermelon emergence at low temperature, 1161

Gliadin

wheat disease resistance, 1015

Gluten strength

semolina extraction rate, 1001

Glutenin

wheat disease resistance, 1015

Glyphosate, 538

weed control timing and seed quality, 1213 Grain protein . 537. 541 managing green manure in semiarid Canadian prairie, 11

Grain quality

influence of protein concentration on farinograph measurements, 765

Grain yield, 535, 537, 541

cropping frequency and wheat production in semiarid prairie,

optimum acquisition times for remote sensing, 97

Granular inoculant

inoculation and N effects of N fixation, 79

inoculation and N effects on pea vield, 89

Grape, wine

polyethelene sleeve and mulch effects on grapevine development,

polyethelene sleeve and mulch effects on vineyard temperatures,

Grass

ARC Mountain View June grass,

grasses for saline Saskatchewan soils, 1037

herbage production of nine grasses,

leaf and stem nutritive value of timothy, 1101

Grasses, native

potential of native grasses as ethanol feedstock, 1067

Gray goldenrod Solidago nemoralis Ait., 1221

Grazing, 539 Grazing, deferred

forage cropping systems in Saskatchewan, 187

Grazing, mixed, 541

Grazing response

assessment of variation in Idaho fescue, 1077

Green manure

Aphanomyces euteiches response to oat extract, 687

Green fallow

managing green manure in semiarid Canadian prairie, 11

Greenhouse

pollen foraging by bumblebees, 599

Growing degree days modelling berseem clover development, 511

Growth stage, 538, 539, 540

birdsfoot trefoil harvest management, 525

Hard red spring wheat (see Wheat, hard red spring)

Harvest index

creeping bentgrass seed production,

Harvesting time

seed-borne Fusarium spp. in spring wheat, 757

Hav

harvest management on grass performance in northeast Saskatchewan, 205

Hearth bread

baking test for Uruguayan French style bread, 949

Heavy metals, 536, 541

Hedonic price function

the value of apple characteristics,

Hemicellulose

potential of native grasses as ethanol feedstock, 1067

fertilizer requirements of industrial hemp, 939

Herbage

herbage production of nine grasses, 163

Herbage biomass

sub-alpine meadow in northern China, 529

Herbage composition, 542

Herbage yield, 542

Herbicide-resistant crops seeding date effect on

herbicide-tolerant canola, 419

Herbicide timing

glyphosate timing in glyphosate-resistant soybean, 1199

Heritability

parent-offspring regression in bromegrass, 125

Heritage bean

Arikara Yellow common bean, 807

Heterosis

mur and nap cytoplasm hybrid performance comparisons, 731

Hexaploid wheat ergot on wheat, 625

Hog manure, 536

herbage yield and crude protein responses to hog manure, 773

Hordeum bulbosum

quantitative scald resistance in barley, 935

Hordeum vulgare L. (see Barley)

Host-plant dynamics

mycorrhizal colonization of flax,

HT-2 toxin

HT-2 and T-2 toxins in barley, 1189

Humidity

reflective tarps to improve postharvest quality of blueberries, 873

Hybrid

crossing in lentil, 981 mur and nap cytoplasm hybrid performance comparisons, 731 theoretical hybridization potential of transgenic safflower, 923

Hybrid bromegrass

Knowles hybrid bromegrass, 815

Hydrodistillation

essential oil of Nova Scotia dill, 1155

Hydroponic culture

ASA and camptothecin, 885

Imazamox

field performance of imazamox-resistant spring wheat, 1205

Imazethapyr

sensitivity of kidney beans to S-metolachlor and Imazethapyr, 405

Incubation

faba bean infection by Sclerotinia trifoliorum, 1235

Indole-3-acetic acid

daylength affects IAA content and flowering in Doritis pulcherrima, 881

Infestation level, 538

Injection

herbage yield and crude protein responses to hog manure, 773

Inoculant, granular

inoculation and N effects of N fixation, 79

inoculation and N effects on pea yield, 89

Inoculation

field inoculation for Sclerotinia stem rot, 57

inoculation and N effects of N fixation, 79

inoculation and N effects on pea vield, 89

Rhizobium in nonlegume crops, 37 Sclerotinia inoculations in soybean,

Insect

influence of leafhoppers on bean yield, 891

vegetable yield loss without pest control, 915

Insect bioassay

gene resistance to aphids, 785

Intake

grasses for saline Saskatchewan soils, 1037

Intercrop

forage cropping systems in Saskatchewan, 187

Interspecific cross

embryo rescue in Brassica, 965

Introgression

theoretical hybridization potential of transgenic safflower, 923

Invasive week

Phragmites australis, 365

Irrigation

productivity and profitability of straw-tillage and N treatments in Alberta, 411

June grass

ARC Mountain View June grass, 245

Kentucky bluegrass, 542

Kernel-fractions

distribution of deoxynivalenol in Gibberella-infected food, 909

Kernel plumpness

predicting agronomic performance using radiometry, 1

Koeleria cristata

ARC Mountain View June grass, 245

Koleria macrantha

ARC Mountain View June grass, 245

Krascheninnikovia lanata winterfat establishment, 173

Lathyrus maritimus L.

fatty acid and elemental composition of beach pea, 65

Leaf boron and zinc

micronutrient nutrition of apple orchards, 823

Leaf emergence

leaf development in spring barley,

Leaves, detached

spring black stem of alfalfa, 311

Lentil

annual forage legumes in Alberta and Saskatchewan, 143 crossing in lentil, 981 Leucanthemum ircutianum,

Leucanthemum × superbum, Leucanthemum vulgare Lam., 343

Line source

carbon isotope discrimination in tall fescue, 157

Linolenic acid, low

2090 low linolenic acid flax, 797 Linum usitatissimum L. (see Flax)

Lipid

fatty acid and elemental composition of beach pea, 65

Livestock, 538

Lobster processing waste, 537

Lodging, 540

early seeding improves oat yield and quality, 431

nitrogen and seeding date improves oat yield, 1025

Lolium multiflorum

production of Westerwolds ryegrass, 791

Lotus corniculatus L.

birdsfoot trefoil harvest management, 525

Low linolenic acid

2090 low linolenic acid flax, 797

Lucerne

fertilizers on seed alfalfa, 1105 Lycopersicon esculentum (see Tomato)

Malus × domestica Borkh. (see Apple)

Management, 537

Manure, 535, 542

barley yield and nutrient uptake under fresh or composted manure, 987

Manure application methods, 536

Manure, green

Aphanomyces euteiches response to oat extract, 687

Manure, hog 536

herbage yield and crude protein responses to hog manure, 773

Maturity

dry bean planting date, 31 increasing urea safety with NBPT, 105

Maturity, early

Early Rose pink bean, 227 Morden003 navy bean, 231 Nordbec barley, 805

Maximum economic yield season of year response by orchardgrass to N fertilizer, 129

Meadow bromegrass

parent-offspring regression in bromegrass, 125 Medicago

annual forage legumes in Alberta and Saskatchewan, 143

Medicago sativa L. (see Alfalfa)

Medicago sativa subsp. falcata spring black stem of alfalfa, 311

Medicinal plants, 540

Mesophyll conductance

polyethelene sleeve and mulch effects on grapevine development, 555

Methyl jasmonate

methyl jasmonate improves watermelon emergence at low temperature, 1161

Microbial populations

reflective tarps to improve postharvest quality of blueberries, 873

Micropropagation

culture in vitro de lilas hybride français, 279

Microsphaera pulchra

powdery mildew control in flowering dogwood, 837

Milling

semolina extraction rate, 1001

Mineral

sub-alpine meadow in northern China, 529

Mitigation practices, 536

Mixed-grazing, 541

Mixograph

early generation quality tests, 71

Mixtures, 539

Model, 541

Moisture

canola and mustard response to temperature and water stress, 697

Monocrop

forage cropping systems in Saskatchewan, 187

Morphology

assessment of variation in Idaho fescue, 1077

initial N status and residual leaf area after cutting affect alfalfa regrowth, 1059

soybean cultivars in Turkey, 181

Mycelium

Sclerotinia inoculations in soybean, 615

Mycorrhizae, 535, 536 Mycotoxin, 538

Nitrogen accumulation nitrogen use efficiency of potato, 589 Nitrogen concentration cropping frequency and wheat production in semiarid prairie, 487

Nitrogen credit

N benefits of grain legumes in Manitoba, 1093

Nitrogen management

influence of protein concentration on farinograph measurements, 765

Nitrogen mineralization nitrogen use efficiency of potato, 589

Nitrogen placement

N management, seeding depth and canola production, 719

Nitrogen source

N management, seeding depth and canola production, 719

Nitrogen storage

initial N status and residual leaf area after cutting affect alfalfa regrowth, 1059

Nitrogen rate

N management, seeding depth and canola production, 719

Nitrogen yield

cropping frequency and wheat production in semiarid prairie, 487

Nitrogen uptake, 542

Nitrogen utilization efficiency nitrogen use efficiency of potato, 589

Narrow-row soybean glyphosate timing in glyphosate-resistant soybean, 1199

Nassella

harvest management on grass performance in northeast Saskatchewan, 205

Native grasses

potential of native grasses as ethanol feedstock, 1067

Native rangeland

herbage yield and crude protein responses to hog manure, 773

Native weed species

Panicum capillare L., 327

Navy bean influence of leafhoppers on bean yield, 891

Morden003 navy bean, 231

Neural network modelling modelling berseem clover development, 511 Neutral detergent fibre

leaf and stem nutritive value of timothy, 1101

Nitrate, 536, 541

Nitrate and ammonium leaching, 535 Nitrogen, 537, 541

fertilizer requirements of industrial hemp, 939

Nitrogen-15

grass competitive ability and defoliation tolerance, 195

Nitrogen fertilization

nitrogen fertilization of processing tomatoes, 865 production of Westerwolds

ryegrass, 791 Nitrogen fixation

Rhizobium in nonlegume crops, 37

Nitrogen recovery season of year response by orchardgrass to N fertilizer, 129

Nitrogen uptake

grass competitive ability and defoliation tolerance, 195

Nitrogen use efficiency

season of year response by orchardgrass to N fertilizer, 129

Nitrogen yields

managing green manure in semiarid Canadian prairie, 11

Nitrous oxide, 536

NO, leaching

managing green manure in semiarid Canadian prairie, 11

Nodulation

inoculation and N effects of N fixation, 79

No-tillage

effect of tillage and cropping system on sugarbeet, 739

No-till system, 535

Normalized difference vegetation index

optimum acquisition times for remote sensing, 97

Northern mixed prairie

winterfat establishment, 173

Nursery

waste and compost use in container nursery substrates, 1127

Nutraceutical crops, 540

Nutrient uptake, 535

barley yield and nutrient uptake under fresh or composted manure, 987

Nutrition minérale

concentration de la solution nutritive pour la culture hors sol de la tomate, 299 Nutritive value

grasses for saline Saskatchewan soils, 1037

herbage production of nine grasses, 163

swath grazing potential, 1051

Oat, 538

AFLP analysis of Canadian oat cultivars, 23

Boudrias oat, 241

companion planting forages, 217 early seeding improves oat yield and quality, 431

nitrogen and seeding date improves oat yield, 1025

Oat, spring

Boudrias oat, 241

Off-types

sources of off-types in pedigreed seed of common spring wheat, 519

Oidium spp

powdery mildew control in flowering dogwood, 837

ilseed

canola and mustard response to temperature and water stress, 697

Prairie Blue flax, 801

Onion

reduced tillage for onion and carrot, 1167

Operational diversity

seeding date effect on herbicide-tolerant canola, 419

Organic agriculture mycorrhizal colonization

mycorrhizal colonization of flax, 1097

Organic culture, 541

Ornamentals

waste and compost use in container nursery substrates, 1127

Overwintering

climate change and winter damage to fruit trees, 1113

Ox-eye daisy

Leucanthemum vulgare Lam., 343

Phosphorus

forage quality of seeded native grasses in the fall, 503

managing P for yield and quality of sweet corn grown on high P soils, 713

Phosphorus fertilization

managing P for yield and quality of sweet corn grown on high P soils, 713

Phoma sclerotioides spring black stem of alfalfa, 311 Panicum capillare L., 327 Papermill biosolid, 539

Pasta

semolina extraction rate, 1001

Pasture, 541

harvest management on grass performance in northeast Saskatchewan, 205

Pathogenesis

faba bean infection by Sclerotinia trifoliorum, 1235

Pea

annual forage legumes in Alberta and Saskatchewan, 143

Aphanomyces euteiches response to oat extract, 687

CDC golden field pea, 237 CDC striker field pea, 239

Cutlass field pea, 533

evapotranspiration of pea, 473 inoculation and N effects of N

fixation, 79 inoculation and N effects on pea

vield, 89 loss of seedling vigor in pea, 443

Miser field pea, 235 resistance to powdery mildew in pea, 1183

Pea, field, 540

CDC golden field pea, 237 CDC striker field pea, 239

Cutlass field pea, 533

inoculation and N effects of N fixation, 79

inoculation and N effects on pea yield, 89

Miser field pea, 235

optimum acquisition times for remote sensing, 97

resistance to powdery mildew in pea, 1183

Peach potato aphid (Myzus persicae Sulzer)

gene resistance to aphids, 785

Pedigreed seed sources of off-types in pedigreed seed of common spring wheat,

519 Penetration

faba bean infection by Sclerotinia trifoliorum, 1235

Pepino

Turia pepino, 603

Perennial

ACE-1 perennial cereal rye, 819

Persistence

grasses for saline Saskatchewan soils, 1037

Pest forecasting

root maggot damage to prairie canola roots, 1171

Phaseolus vulgaris L. (see Bean) Phenology modelling

modelling berseem clover development, 511

Phleum pratense L.

companion planting forages, 217 leaf and stem nutritive value of timothy, 1101

Phoma medicaginis

spring black stem of alfalfa, 311

Phosphorus, 536

fertilizer requirements of industrial hemp, 939

Phosphorus management

managing P for yield and quality of sweet corn grown on high P soils, 713

Photoperiod

daylength affects IAA content and flowering in Doritis pulcherrima, 881

Photosynthesis

polyethelene sleeve and mulch effects on grapevine development, 555

Phragmites australis, 365

Phyllactinia guttata

powdery mildew control in flowering dogwood, 837

Phyllochron

leaf development in spring barley,

Pilot-scale commercial baking early generation quality tests, 71

Pink bean

Early Rose pink bean, 227 Pisum sativum L. (see Pea)

Plant development

modelling berseem clover development, 511

Plant growth-promoting rhizobacteria Rhizobium in nonlegume crops, 37

Plant nitrate

season of year response by orchardgrass to N fertilizer, 129

Plant secondary metabolite ASA and camptothecin, 885

Plant resistance

resistance of canola-quality Sinapis alba to Ceutorhynchus obstrictus, 397

Plant tissue, 541

effect of foliar Cu on wheat, 47

Plasticulture

polyethelene sleeve and mulch effects on grapevine development, 555

polyethelene sleeve and mulch effects on vineyard temperatures, 545

Pleine expression des caractères ornementaux

rusticité et croissance de dix cultivars de potentilles, 569 rusticité et croissance de

genevriers, 1135

rusticité et croissance de six cultivars de spirées, 265

Pollen

pollen foraging by bumblebees, 599

**Polyamines** 

methyl jasmonate improves watermelon emergence at low temperature, 1161

Polymer seed coating

polymer seed coating of fall-seeded canola, 971

Postharvest fungi

alfalfa resistance to postharvest Aspergillus species, 1193

Postharvest handling

reflective tarps to improve postharvest quality of blueberries, 873

Potato, 538

colour and potato chip quality, 291 nitrogen use efficiency of potato, 589 potato nitrogen use efficiency, 845 potato yield and processing quality, 855

Potato leafhopper

influence of leafhoppers on bean yield, 891

Potato nitrogen, 536 Potato yield, 538

Powdery mildew

resistance to powdery mildew in pea, 1183

Powdery mildew resistance Miser field pea, 235

Precipitation

herbage yield and crude protein responses to hog manure, 773

Primary growth

herbage production of nine grasses, 163

Processing tomato

nitrogen fertilization of processing tomatoes, 865

Protein concentration

influence of protein concentration on farinograph measurements, 765

Protein content

early generation quality tests, 71 Protein yield

harvest management on grass

performance in northeast Saskatchewan, 205

Puccina coronata early seeding improves oat yield and quality, 431

carrot cavity spot, 607

barley, 935

Quality screening semolina extraction rate, 1001 Quality standards colour and potato chip quality, 291 Quantitative resistance quantitative scald resistance in

Rainfall

fertilizer requirements of industrial hemp, 939

Rangeland, native herbage yield and crude protein responses to hog manure, 773

Reclamation ARC Mountain View June grass, 245 Recruitment depth

tillage index predicts recruitment depth, 319

Reduced tillage reduced tillage for onion and carrot, 1167

sulphur fertilizer management in canola and wheat, 453

Reducing ammonia emissions, 536 Reflective (laminated Mylar) film reflective tarps to improve postharvest quality of blueberries, 873

Regression analysis parent-offspring regression in bromegrass, 125

Régulateur de croissance culture in vitro de lilas hybride français, 279

Relative yield season of year response by orchardgrass to N fertilizer, 129

Remote sensing optimum acquisition times for remote sensing, 97

predicting agronomic performance using radiometry, 1

Resistance

alfalfa resistance to postharvest Aspergillus species, 1193 check rows required for root rot screening, 691

field inoculation for Sclerotinia stem rot, 57

field performance of imazamox-resistant spring wheat, 1205

influence of leafhoppers on bean vield, 891

Sclerotinia inoculations in soybean, 615

resistance to powdery mildew in pea, 1183

Resistance to leaf and stem rust Lovitt hard red spring wheat, 811 Respiration

loss of seedling vigor in pea, 443 Restoration

winterfat establishment, 173

Revegetation ARC Mountain View June grass, 245

Rhizobacteria, plant growth-promoting rhizobium in nonlegume crops, 37 Rhizobium

inoculation and N effects of N fixation, 79

Rhizoctonia solani rhizoctonia blight of chickpea, 901

Rizosphere Rhizobium in nonlegume crops, 37

Root depth evapotranspiration of pea, 473

Root length infected by mycorrhizae,

Root maggot seeding date effect on herbicide-tolerant canola, 419

Aphanomyces euteiches response to oat extract, 687

Rotation, 535 Rust, resistance to

Lovitt hard red spring wheat, 811 Rye

ACE-1 perennial cereal rye, 819 Rve cover crop

managing P for yield and quality of sweet corn grown on high P soils, 713

S-metolachlor

sensitivity of kidney beans to S-metolachlor and Imazethapyr,

S14-M7

glyphosate timing in glyphosate-resistant soybean, 1199

theoretical hybridization potential of transgenic safflower, 923 Salinity

grasses for saline Saskatchewan soils, 1037

Saturated fatty acids genotypic and environmental effects of saturated fatty acids in canola, 749

Scald

quantitative scald resistance in barley, 935

Sclerotinia sclerotiorum, 537 Sclerotinia inoculations in sovbean, 615

Sclerotinia stem rot field inoculation for Sclerotinia stem rot, 57

Seafood waste, 541, 542

Season, 541 Secale cereale (see Rye)

Secondary metabolites, 540

fatty acid and elemental composition of beach pea, 65 loss of seedling vigor in pea, 443 production of Westerwolds ryegrass, 791

Seed germination and vigor weed control timing and seed quality, 1213

Seed head density creeping bentgrass seed production, 117

Seed, plump early seeding improves oat yield and quality, 431 nitrogen and seeding date improves oat yield, 1025

Seed protein inoculation and N effects on pea yield, 89

Seed quality genotypic and environmental

effects of saturated fatty acids in canola, 749 Seed size

Miser field pea, 235 Seed, thin

nitrogen and seeding date improves oat yield, 1025

Seed treatment rhizoctonia blight of chickpea, 901

Seed yield

assessment of variation in Idaho fescue, 1077 creeping bentgrass seed

production, 117 inoculation and N effects on pea yield, 89

Seeding date, 535 dry bean planting date, 31 early seeding of canola and

mustard, 705

fall seeding date and polymer coatings, 955

rhizoctonia blight of chickpea, 901

Seeding depth

N management, seeding depth and canola production, 719

Seeding, fall

canola seed quality, 463

Seeding management seeding date effect on

herbicide-tolerant canola, 419

Seeding method, 537

Seedling vigor

loss of seedling vigor in pea, 443

Seedrow opener

N management, seeding depth and canola production, 719

Selection technique

check rows required for root rot screening, 691

Selenium, 542

Semiarid prairie

early seeding of canola and mustard, 705

Semolina

semolina extraction rate, 1001

Sequential C-banding and GISH wheat disease resistance, 1015

Sheep, 541

Short straw

Nordbec barley, 805

Silage corn, 538

Simulated grazing, 538

birdsfoot trefoil harvest management, 525

Sinapis alba

resistance of canola-quality
Sinapis alba to Ceutorhynchus
obstrictus, 397

Soil

zinc responses of dry beans in Manitoba, 213

Soil amendment, 535, 539

Soil extractable P

fertilizer requirements of industrial hemp, 939

Soil inorganic N

potato nitrogen use efficiency, 845

Soil, high P

managing P for yield and quality of sweet corn grown on high P soils, 713

Soil nutrients

barley yield and nutrient uptake under fresh or composted manure, 987

Soil pH effects

metribuzin on carrot, 669

Soil properties, 539

Soil solution boron

micronutrient nutrition of apple orchards, 823

Soil remediation, 536

Soil temperature

rhizoctonia blight of chickpea, 901

Solanum muricatum

Turia pepino, 603

Solanum tuberosum (see Potato)

Solidago nemoralis Ait., 1221

Solin

2090 low linolenic acid flax, 797

Soluble organic carbon, 541

Solution nutritive

concentration de la solution nutritive pour la culture hors sol de la tomate, 299

Soybean

field inoculation for *Sclerotinia* stem rot, 57

glyphosate timing in

glyphosate-resistant soybean, 1199

Sclerotinia inoculations in soybean, 615

soybean cultivars in Turkey, 181 weed control timing and seed

quality, 1213

western corn rootworm, 305

Soybean cultivars

glyphosate timing in glyphosate-resistant soybean, 1199

Species replacement

grass competitive ability and defoliation tolerance, 195

Spikelet

production of Westerwolds ryegrass, 791

Spring frost

climate change and winter damage to fruit trees, 1113

Stability, 537

Stand density, 538

birdsfoot trefoil harvest management, 525

increasing urea safety with NBPT, 105

Steam distillation

essential oil of Nova Scotia dill,

Steer, 541

Stem regrowth

initial N status and residual leaf area after cutting affect alfalfa regrowth, 1059

Stérilisation

culture in vitro de lilas hybride français, 279

Stipa

grass competitive ability and defoliation tolerance, 195

Stomatal conductance

polyethelene sleeve and mulch effects on grapevine development, 555

Stress, 535

Substrate utilization

herbicides and soil microorganisms, 677

Sugarbeet

effect of tillage and cropping system on sugarbeet, 739

Sulphur, 536

sulphur fertilizer management in canola and wheat, 453

Summerfallow substitute

managing green manure in semiarid Canadian prairie, 11

Survie

rusticité et croissance de dix cultivars de potentilles, 569

rusticité et croissance de genevriers, 1135

rusticité et croissance de six cultivars de spirées, 265

Sweet corn quality

managing P for yield and quality of sweet corn grown on high P soils, 713

Sweet corn yield

managing P for yield and quality of sweet corn grown on high P soils, 713

T-2 toxin

HT-2 and T-2 toxins in barley, 1189 T1BL:1RS translocation

wheat disease resistance, 1015

Taxonomy

Amaranthus retroflexus, A.
Powellii and A. hybridus, 631

Temperature

reflective tarps to improve postharvest quality of blueberries, 873

Temperature, air

rhizoctonia blight of chickpea, 901

Temperature effects

metribuzin on carrot, 669

Temperature, low

dry bean planting date, 31

Test weight

early seeding improves oat yield and quality, 431

nitrogen and seeding date improves oat yield, 1025 Thin seed

nitrogen and seeding date improves oat yield, 1025

Tillage

effect of tillage and cropping system on sugarbeet, 739

Tillage index

tillage index predicts recruitment depth, 319

Tillage, reduced

reduced tillage for onion and carrot, 1167

sulphur fertilizer management in canola and wheat, 453

tillage index predicts recruitment depth, 319

Tillage timing

productivity and profitability of straw-tillage and N treatments in Alberta, 411

Tiller, 542

production of Westerwolds ryegrass, 791

Time of application, 538

Timothy, 542

Tolerance

influence of leafhoppers on bean yield, 891

Tolérance au froid

rusticité et croissance de dix cultivars de potentilles, 569

rusticité et croissance de genevriers, 1135

rusticité et croissance de six cultivars de spirées, 265

Tomato

concentration de la solution nutritive pour la culture hors sol de la tomate, 299

nitrogen fertilization of processing tomatoes, 865

pollen foraging by bumblebees, 599 vegetable yield loss without pest control, 915

Tomato mosaic virus Turia pepino, 603

Tomato, processing nitrogen fertilization of processing tomatoes, 865

Transformation gene resistance to aphids, 785

Transgenic theoretical hybridizati

theoretical hybridization potential of transgenic safflower, 923

Transgenic tobacco gene resistance to aphids, 785 Trifolium

annual forage legumes in Alberta and Saskatchewan, 143 Trifolium pratense L., 539

Triticale (spring), 541

Triticale (spring and winter), 537

Triticale (winter), 535

Triticum aestivum L. (see Wheat)

Triticum turgidum var. durum (see Wheat, durum)

Tuber nitrate concentration potato yield and processing quality, 855

Tuber specific gravity
potato yield and processing
quality, 855

Turnip rape

check rows required for root rot screening, 691

Underseeding

companion planting forages, 217

Urea

increasing urea safety with NBPT, 105

Urea-15N

autumn-applied urea-N in apple, 259

Uruguayan bread

baking test for Uruguayan French style bread, 949

Utilisation

rusticité et croissance de dix cultivars de potentilles, 569

rusticité et croissance de genevriers, 1135

rusticité et croissance de six cultivars de spirées, 265

Vaccinium angustifolium Ait simulated acid rain impact on wild blueberries, 877

**Variants** 

sources of off-types in pedigreed seed of common spring wheat, 519

Variety purity testing

sources of off-types in pedigreed seed of common spring wheat, 519

Verge d'or des bois

Solidago nemoralis Ait., 1221

Verticillium albo-atrum slow wilting in alfalfa, 401

Vicia

annual forage legumes in Alberta and Saskatchewan, 143

Vicia faba L.

faba bean infection by Sclerotinia trifoliorum, 1235

Vicia narbonensis L.

faba bean infection by Sclerotinia trifoliorum, 1235

Vigour (seed) canola seed quality, 463

Waste and compost utilization waste and compost use in container nursery substrates, 1127

Wastewater treatment, 543

Water, 535

Water deficit

cropping frequency and wheat production in semiarid prairie, 487

Water use efficiency

carbon isotope discrimination in tall fescue, 157

cropping frequency and wheat production in semiarid prairie, 487

evapotranspiration of pea, 473

Watermelon

methyl jasmonate improves watermelon emergence at low temperature, 1161

Weathering

swath grazing potential, 1051

Weed

vegetable yield loss without pest control, 915

Weed dry weight

weed control timing and seed quality, 1213

Weed biology

Amaranthus retroflexus, A. Powellii and A. hybridus, 631
Leucanthemum vulgare Lam., 343

Panicum capillare L., 327

Phragmites australis (Cav.) Trin. ex Steud, 365 Solidago nemoralis Ait., 1221

Weed control , 540, 541

metribuzin on carrot, 669 Weed control timing

weed control timing and seed quality, 1213

Weed emergence

tillage index predicts recruitment depth, 319

Weed seedlings

tillage index predicts recruitment depth, 319

Weed species, native

Panicum capillare L., 327 Western corn rootworm

western corn rootworm, 305 Westerwolds ryegrass production of Westerwolds ryegrass, 791

Wetlands

constructed wetlands, 543 Phragmites australis, 365

Wheat, 538, 542

baking test for Uruguayan French style bread, 949 Brookfield spring wheat, 1109

effect of foliar Cu on wheat, 47

effect of tillage and cropping system on sugarbeet, 739

ergot on wheat, 625 field performance of

imazamox-resistant spring wheat, 1205

increasing urea safety with NBPT, 105

influence of protein concentration on farinograph measurements, 765

Lovitt hard red spring wheat, 811 optimum acquisition times for remote sensing, 97

seed-borne *Fusarium* spp. in spring wheat, 757

sources of off-types in pedigreed seed of common spring wheat, 519

Wheat, durum

ergot on wheat, 625 semolina extraction rate, 1001

Wheat, hard red spring
Brookfield spring wheat, 1109
Lovitt hard red spring wheat, 811
Wheat (winter), 535

Wheat rotations

N benefits of grain legumes in Manitoba, 1093

White mold, 537

field inoculation for *Sclerotinia* stem rot, 57

Wholesalers' preference

the value of apple characteristics, 829

Wild mustard

mycorrhizal colonization of flax, 1097

Wine grapes

polyethelene sleeve and mulch effects on grapevine development, 555

polyethelene sleeve and mulch effects on vineyard temperatures, 545

Winter, 535

Winter hardiness, 537

Winter injury

climate change and winter damage to fruit trees, 1113

Winter kill

assessment of variation in Idaho fescue, 1077

Winter survival, 535

Winter swath grazing

swath grazing potential, 1051

Witch grass

Panicum capillare L., 327

Yield components

canola and mustard response to temperature and water stress, 697

creeping bentgrass seed production, 117

early seeding improves oat yield and quality, 431

nitrogen and seeding date improves oat yield, 1025

seeding date effect on herbicide-tolerant canola, 419

Yield, high

Black violet common bean, 223 Early Rose pink bean, 227 Nordbec barley, 805

Yield loss

vegetable yield loss without pest control, 915

Yield (quality)

canola seed quality, 463

Zero tillage

sulphur fertilizer management in canola and wheat, 453

Zinc

micronutrient nutrition of apple orchards, 823

Zinc products

zinc responses of dry beans in Manitoba, 213

